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EXAMINER

NASH, LASHANYA RENEE

ART UNIT PAPER NUMBER

2153

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,527

Applicant(s)

RHODES, N. LEE

Examiner

LaShanya R. Nash

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on March 10, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to an Amendment filed March 10, 2005. Claims 1-47 are presented for further consideration.

Response to Arguments

Claim rejections, see Remarks/Arguments I, with respect to claims 25-26, and 28 under 35 USC 112, second paragraph are withdrawn.

Applicant's arguments with respect to claims 14-29 have been considered but are moot in view of the new grounds of rejection.

In considering the Applicant's arguments the following factual remarks are noted:

(I) Applicant contends that Fishman fails to teach or suggest an identifier associated with each record event, including updating only a portion of the statistical model associated with the identifier.

In considering (I), Applicant contends that Fishman fails to teach or suggest an identifier associated with each record event, including updating only a portion of the statistical model associated with the identifier. Examiner respectfully disagrees. As asserted by Applicant, Fishman discloses a method for building predictive models, wherein the models are updated by processing the new transactional records only, (abstract; paragraph [0008]). Examiner further asserts that Fishman explicitly discloses that the aforementioned transactional records (i.e. record event) are associated with an identifier, (i.e. customer identifier/attribute; paragraphs [0021]-[0023]; Figure 1- *Cust17*). These records are observed by different transactional sources, wherein

Art Unit: 2153

each transactional source contains records associated with an identical identifier (i.e. m_i ; paragraphs [0017]-[0020]). Examiner cites Figure 1, which expressly displays that each of aforementioned transactional sources (i.e. demographic customer data 10; click through log 12; and purchase table 14) include various observed records (i.e. age; data; pageID; productID) that all correspond to the identical share identifier, (i.e. cust17). Fishman further discloses that when a new transactional record becomes present, that the predictive model method updates the records contained in these transactional sources, which correspond to a specified common identifier (i.e. t_{mi} ; paragraphs [0037]-[0041]; Figure 2-item 24). In the case which in the previous cited example, the method processes and updates all records that correspond to observations for customer 17 by processing each transactional source of data separately for that common identifier (paragraph [0024]). Therefore, Examiner asserts that the predictive model as disclosed by Fishman shows the limitations of Applicant's invention, specifically an identifier associated with each record event, including updating only a portion of the statistical model associated with the identifier, as set forth below in the office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 37-38, and 45 are rejected under 35 U.S.C. 103(a) as being anticipated by Porras et al. (US Patent 6,321,338) in view of Fishman et al. (US Patent Application Publication 2001/0037321), hereinafter referred to as Porras and Fishman.

In reference to claim 1, Porras discloses a method for network surveillance that includes real-time measuring and monitoring of network traffic, in order to subsequently generate network statistical profiles (abstract). Porras explicitly discloses:

- A method for analyzing a stream of usage data, (column 1, lines 44-54; column 4, line 60 to column 5, line 3; column 5, line 30-52; and column 3, lines 42-54), comprising:
 - Generating a statistical model (i.e. statistical profile) from a set of record events, (column 4, line 60 to column 5, line 3 and column 5, line 30-52);
 - Receiving a most recent record event, (column 2, lines 11-18 and column 6, lines 37-52);
 - and
 - Updating the statistical model using the most recent event by adding the most recent record to the statistical model, (column 2, lines 11-18 and column 6, lines 37-52).

Art Unit: 2153

Although Porras disclose substantial features of the claimed invention, the reference fails to explicitly disclose: an identifier is associated with each record event, including only a portion of the statistical model associated with the identifier. Nonetheless, these would have been an obvious modifications to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

In an analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, (paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract). Fishman further discloses that the transactional records (i.e. record event) are associated with an identifier, (i.e. customer identifier/attribute; paragraphs [0021]-[0023]; Figure 1- *Cust17*), and further that the predictive model method updates the records, which correspond to a specified common identifier (i.e. t_{mi} ; paragraphs [0037]-[0041]; Figure 2-item 24). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3).

In reference to claim 37, Porras explicitly discloses a system for employing the aforementioned method, (column 2, lines 2-10 and Figure 2). Porras explicitly shows:

- A network usage analysis system for analyzing a stream of network usage data, (column 2, lines 2-10; column 1, lines 44-54; column 4, line 60 to column 5, line 3; column 5, line 30-52; and column 3, lines 42-54) comprising:
 - A data analysis server (i.e. monitor) which generates a statistical model (i.e. statistical profile) from a set of usage data record events, and upon receiving a most recent record

Art Unit: 2153

event, the data analysis system server updates the statistical model using the most recent record event by adding the most recent record event to the statistical model, (column 3, lines 32-54; column 4, line 48 to column 5, line 3; column 2, lines 11-18 and column 6, lines 37-52).

Although Porras disclose substantial features of the claimed invention, the reference fails to explicitly disclose: an identifier is associated with each record event, including only a portion of the statistical model associated with the identifier. Nonetheless, these would have been an obvious modifications to the aforementioned system to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

In an analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, (paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract). Fishman further discloses that the transactional records (i.e. record event) are associated with an identifier, (i.e. customer identifier/attribute; paragraphs [0021]-[0023]; Figure 1- *Cust17*), and further that the predictive model method updates the records, which correspond to a specified common identifier (i.e. t_{mi} ; paragraphs [0037]-[0041]; Figure 2-item 24). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned system in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3).

All subsequent system claims will be discussed with the appropriately associated method claims.

In reference to claim 45, Porras explicitly discloses a computer program product on a computer readable medium for employing the aforementioned method, (column 2, lines 25-35).

Porras explicitly shows:

- A computer readable medium having computer executable instructions for performing a method for analyzing a stream of network data, (column 2, lines 25-35; column 1, lines 44-54; column 4, line 60 to column 5, line 3; column 5, line 30-52; and column 3, lines 42-54) the method comprising:
 - Generating a statistical model (i.e. statistical profile) from a set of record events, (column 4, line 60 to column 5, line 3 and column 5, line 30-52);
 - Receiving a most recent record event, (column 2, lines 11-18 and column 6, lines 37-52); and
 - Updating the statistical model using the most recent event by adding the most recent record to the statistical model, (column 2, lines 11-18 and column 6, lines 37-52).

Although Porras disclose substantial features of the claimed invention, the reference fails to explicitly disclose: an identifier is associated with each record event, including only a portion of the statistical model associated with the identifier. Nonetheless, these would have been an obvious modifications to the aforementioned system to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

In an analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, (paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract). Fishman further discloses that the transactional records (i.e. record event) are associated with an identifier, (i.e. customer

Art Unit: 2153

identifier/attribute; paragraphs [0021]-[0023]; Figure 1- *Cust17*), and further that the predictive model method updates the records, which correspond to a specified common identifier (i.e. t_{mi} ; paragraphs [0037]-[0041]; Figure 2-item 24). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned system in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3).

All subsequent system claims will be discussed with the appropriately associated method claims.

In reference to claims 2 and 38, Porras explicitly shows the limitations, (column 6, lines 47-50).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porras et al. (US Patent 6,321,338) and further in view of Sarkissian et al (US Patent 6,771,646) and Fishman (US Patent Application Publication 2001/0037321), hereinafter referred to as Porras and Sarkissian and Fishman, respectively.

In reference to claim 13, Porras discloses a method for network surveillance that includes real-time measuring and monitoring of network traffic, in order to subsequently generate network statistical profiles (abstract). Porras explicitly discloses:

- A method for analyzing a stream of data over a rolling time (i.e. short-term or long-term) interval comprising, (column 1, lines 44-54; column 4, line 60 to column 5, line 3; column 5, line 30-52; and column 3, lines 42-54):

Art Unit: 2153

- Defining a statistical model for analyzing the stream of data over the rolling time interval, (column 5, lines 30-52 and column 6, lines 38-52);
- Defining the rolling time interval to include a plurality of update intervals, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52);
- Receiving a record event from the stream of data for each update time interval, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52);
- Generating the statistical model over the rolling time interval using the statistical model and each record event, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52); and
- Updating the statistical model using the statistical model and a most recent record event for a most recent update time interval, (column 2, lines 11-18 and column 6, lines 37-52).

In an art, Sarkissian discloses a method that involves employing a cache subsystem for storing flow-based statistical measures, and subsequent supports real-time network monitoring (column 2, lines 30-32; column 2, lines 50-67; column 3, lines 1-15; column 4, line 54 to column 5, line 24; and column 19, line 55 to column 20, line 2). One of ordinary skill in the art would have been so motivated to implement this into feature into the aforementioned methodology as disclosed by Porras, so as to reduce latency time associated with memory accesses thereby improving process efficiency, (Sarkissian column 2, lines 57-67).

The references, Porras and Sarkissian fail to disclose updating only a portion of the statistical model associated with the most recent record event. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

Art Unit: 2153

In another analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, (paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3).

Claim 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras et al. (US Patent 6,321,338), and in view of Sarkissian et al (US Patent 6,771,646), and further in view of Kawasaki (US Patent 6,539,375) and Fishman et al. (US Patent Application Publication 2001/0037321), hereinafter referred to as Porras Sarkissian, Kawasaki, and Fishman respectively.

In reference to claim 23, Porras discloses a method for network surveillance that includes real-time measuring and monitoring of network traffic, in order to subsequently generate network statistical profiles (abstract). Porras explicitly discloses:

- A method for analyzing a stream of network usage data over a rolling time (i.e. short-term or long-term) interval comprising, (column 1, lines 44-54; column 4, line 60 to column 5, line 3; column 5, line 30-52; and column 3, lines 42-54):
 - Defining a statistical model for analyzing the stream of network usage data over the rolling time interval, (column 5, lines 30-52 and column 6, lines 38-52);
- Defining the rolling time interval to include a plurality of update intervals, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52);

Art Unit: 2153

- Receiving a record event from the stream of data for each update time interval, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52);
- Generating the statistical model over the rolling time interval using the statistical model and each record event, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52); and
- Updating the statistical model using the statistical model and a most recent record event for a most recent update time interval, (column 2, lines 11-18 and column 6, lines 37-52).

Although Porras disclose substantial features of the claimed invention, the reference fails to explicitly disclose: storing the record event for each update in a history cache; and generating a statistical model each record event stored in the history cache. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Sarkissian.

In an analogous art, Sarkissian discloses a method that involves employing a cache subsystem for storing flow-based statistical measures, and subsequent supports real-time network monitoring (column 2, lines 30-32; column 2, lines 50-67; column 3, lines 1-15; column 4, line 54 to column 5, line 24; and column 19, line 55 to column 20, line 2). One of ordinary skill in the art would have been so motivated to implement this into feature into the aforementioned methodology as disclosed by Porras, so as to reduce latency time associated with memory accesses thereby improving process efficiency, (Sarkissian column 2, lines 57-67). In addition, the references fail to disclose: each record event set including one or more record events, wherein each record event is associated with a user identifier. Nonetheless, this would have been

Art Unit: 2153

an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Kawasaki.

In another analogous art, Kawasaki discloses associating record events to a user identification (i.e. user profile), used in a method for tracking network (i.e. Internet) usage of users, (column 2, lines 47-54; column 4, lines 42-61). This modification to the aforementioned method would have been obvious, because one of ordinary skill in the art would have been so motivated to identifier specific users in order to further correlate network activity records thereby improving detection of abnormal network activity, (Porras column 2, lines 54-64). In addition, the references fail to disclose updating only a portion of the statistical model associated with the most recent record event. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

In another analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, (paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3).

Claims 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras et al. (US Patent 6,321,338), and in view of Sarkissian et al. (US Patent 6,771,646), and further in view of Fishman et al. (US Patent Application Publication 2001/0037321), Costa (US Patent

6,138,121), and Abounaga et al. (US Patent 6,460,045), hereinafter referred to as Porras Sarkissian, Fishman, Costa, and respectively Abounaga.

In reference to claim 29, Porras discloses a method for network surveillance that includes real-time measuring and monitoring of network traffic, in order to subsequently generate network statistical profiles (abstract). Porras explicitly discloses:

- A method for analyzing a stream of network usage data over a rolling time (i.e. short-term or long-term) interval comprising, (column 1, lines 44-54; column 4, line 60 to column 5, line 3; column 5, line 30-52; and column 3, lines 42-54):
 - Defining a statistical model for analyzing the stream of network usage data over the rolling time interval, (column 5, lines 30-52 and column 6, lines 38-52);
 - Defining the rolling time interval to include a plurality of update intervals, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52);
 - Receiving a record event from the stream of data for each update time interval, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52);
 - Generating the statistical model over the rolling time interval using the statistical model and each record event, (column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52); and
 - Updating the statistical model using the statistical model and a most recent record event for a most recent update time interval, (column 2, lines 11-18 and column 6, lines 37-52).

Although Porras disclose substantial features of the claimed invention, the reference fails to explicitly disclose: storing the record event for each update in a history cache; and generating a statistical model each record event stored in the history cache. Nonetheless, this would have been

Art Unit: 2153

an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Sarkissian.

In an analogous art, Sarkissian discloses a method that involves employing a cache subsystem for storing flow-based statistical measures, and subsequent supports real-time network monitoring (column 2, lines 30-32; column 2, lines 50-67; column 3, lines 1-15; column 4, line 54 to column 5, line 24; and column 19, line 55 to column 20, line 2). One of ordinary skill in the art would have been so motivated to implement this into feature into the aforementioned methodology as disclosed by Porras, so as to reduce latency time associated with memory accesses thereby improving process efficiency, (Sarkissian column 2, lines 57-67). In addition, the references fail to disclose generating an aggregation table. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Costa.

In another analogous art, Costa discloses a method for network management in which an aggregation table is employed for tracking system data and generating statistical reports, (column 2, lines 21-31; column 8, lines 1-41; column 8, lines 53 to column 9, line 5). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method, so as to increase the ease of performing various actions (e.g. access, aggregate, extract, etc.) On relevant statistical data thereby increasing process efficiency, (Costa column 2, lines 15-18). In addition, the references fail to disclose updating only a portion of the statistical model associated with the most recent record event. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

In another analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, (paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3). In addition, although the references show substantial features to the claimed invention, the references fail to show explicitly the method generating a histogram statistical model representative of the network data, wherein the histogram having a first axis illustrating total usage defined by a number of bins, each bin having a usage variable range, and a second axis defined by a frequency corresponding to a number of users having a total usage within the usage variable range of each bin. Nonetheless, histogram statistical models were well known in the art at the time of the invention, as further evidenced by Aboulnga. Therefore, this limitation would have been an obvious modification to the aforementioned method, as disclosed by the references, for one of ordinary skill in the art.

In an analogous art, Aboulnga discloses a method of building histogram statistical models, (column 5, line 37 to column 6, line 3). Aboulnga further shows building a histogram that includes a first axis defined a number of bins (i.e. bins; Figure 6-*BUCKETS*), each bin having a variable range (i.e. high to low; Figure 3; column 6, lines 30-55) and a second axis defined by a frequency (Figure 3&6) within the variable range of each bin, (columns 5-10). This modification would have been obvious to one of ordinary skill in the art, so as to increase the accuracy of the statistical model estimations and thereby increasing process effectiveness, (Aboulnga column 1, lines 54-55).

In reference to claim 30, Porras, Sarkissian, Fishman, and Costs and Fishman explicitly show the limitations, (Fishman paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract).

In reference to claims 31-36 Porras, Sarkissian, Fishman, and Costa explicitly show the limitations, (Porras column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52; and Sarkissian column 2, lines 30-32; column 2, lines 50-67; column 3, lines 1-15; column 4, line 54 to column 5, line 24; and column 19, line 55 to column 20, line 2).

Claims 3 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras as applied to claims above, and further in view of Steinbiss et al. (US Patent 6,823,307), hereinafter referred to as Steinbiss.

In reference to claim 3 and 39, although Porras and Fishman disclose substantial features of the aforementioned method, the references fail to explicitly disclose the method further comprising the step of: storing the set of records in a history cache, and wherein if the history cache is full, updating the statistical model includes removing a least recent event from the statistical model. Nonetheless, this would have been an obvious modification to the aforementioned method, to one of ordinary skill in the art at the time of the invention, as further evidenced by Steinbiss.

In an analogous art, Steinbiss discloses a method for employing stochastic models that involves storing recently recognized elements in a cache, (abstract; column 2, lines 25-38; and

Art Unit: 2153

column 5, lines 15-30). Steinbiss further discloses once the cache is full, removing the least recently stored element, (column 5, line 60 to column 6, line 7). This modification would have been obvious, because one of ordinary skill in the art would have been so motivated to implement this feature so as to maximize available memory space, thereby reducing cost associated with larger capacity cache memories, (Steinbiss column 5, line 66 to column 6, line 3).

Claims 4 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Fishman, and Steinbiss as applied to claims above, and further in view of Sarkissian et al. (US Patent 6,771,646), hereinafter referred to as Sarkissian.

In reference to claims 4 and 40, Porras, Fishman, and Sarkissian disclose substantial features of the claimed invention, specifically the statistical model (i.e. statistical profile) including an aggregation of each event record set, (Porras column 6, lines 38-52). However the references fail to explicitly disclose: generating a statistical model each record event stored in the history cache. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Sarkissian.

In an analogous art, Sarkissian discloses a method that involves employing a cache subsystem for storing flow-based statistical measures, and subsequent supports real-time network monitoring (column 2, lines 30-32; column 2, lines 50-67; column 3, lines 1-15; column 4, line 54 to column 5, line 24; and column 19, line 55 to column 20, line 2). One of ordinary skill in the art would have been so motivated to implement this into feature into the

Art Unit: 2153

aforementioned methodology, so as to reduce latency time associated with memory accesses thereby improving process efficiency, (Sarkissian column 2, lines 57-67).

Claims 5-6, 8-10, 12, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Fishman, Steinbiss, and Sarkissian as applied to claims above, and further in view of Costa et al. (US Patent 6,138,121), hereinafter referred to as Costa.

In reference to claims 5 and 41, Porras, Fishman, Steinbiss, and Sarkissian show substantial features of the claimed invention. However, the references fail to show the method wherein generating a statistical model from the set of record events includes generating an aggregation table for tracking and aggregation of record events associated with an identifier. Nonetheless, this modification to the aforementioned method, as disclosed by the references, would have been obvious to one of ordinary skill in the art at the invention, as further evidenced by Costa.

In an analogous art, Costa discloses a method for network management in which an aggregation table is employed for tracking system data and generating statistical reports, (column 2, lines 21-31; column 8, lines 1-41; column 8, lines 53 to column 9, line 5). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method, so as to increase the ease of performing various actions (e.g. access, aggregate, extract, etc.) on relevant statistical data thereby increasing process efficiency, (Costa column 2, lines 15-18).

In reference to claims 6 and 42, Porras, Fishman, Steinbiss, Sarkissian, and Costa explicitly show the limitations, (Costa column 2, lines 21-31; column 8, lines 1-41; column 8, lines 53 to column 9, line 5).

In reference to claims 8 and 43, the references Porras, Fishman, Steinbiss, Sarkissian, and Costa explicitly show the limitations, (Fishman paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract).

In reference to claims 9 and 44, Porras, Fishman, Steinbiss, Sarkissian, and Costa explicitly show the limitations, (Porras column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52 and Costa column 2, lines 21-31; column 8, lines 1-41; column 8, lines 53 to column 9, line 5).

In reference to claim 10, Porras, Fishman, Steinbiss, Sarkissian, and Costs explicitly show the limitations, (Fishman paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract).

In reference to claim 12 Porras, Fishman, Steinbiss, Sarkissian, and Costa explicitly show the limitations, (Sarkissian column 19, line 55 to column 20, line 2).

Art Unit: 2153

Claims 7, 11, and 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Fishman, Steinbiss, Sarkissian, and Costa as applied to claims above, and further in view of Abounaga et al. (US Patent 6,460,045), hereinafter referred to as Abounaga.

In reference to claims 7 and 11, although Porras, Steinbiss, Sarkissian, and Costa show substantial features to the claimed invention, the references fail to show explicitly the method generating a histogram statistical model representative of the network data. Nonetheless, histogram statistical models were well known in the art at the time of the invention, as further evidenced by Abounaga. Therefore, this limitation would have been an obvious modification to the aforementioned method, as disclosed by the references, for one of ordinary skill in the art.

In an analogous art, Abounaga discloses a method of building histogram statistical models, (column 5, line 37 to column 6, line 3). This modification would have been obvious to one of ordinary skill in the art, so as to increase the accuracy of the statistical model estimations and thereby increasing process effectiveness, (Abounaga column 1, lines 54-55).

In reference to claim 14, Porras, Fishman, Steinbiss, Sarkissian, Costs and Abounaga explicitly show the limitations, (Steinbiss column 5, line 60 to column 6, line 7).

In reference to claims 15-22, Porras, Fishman, Steinbiss, Sarkissian, Costs and Abounaga explicitly show the limitations, (Sarkissian column 2, lines 30-32; column 2, lines 50-67; column 3, lines 1-15; column 4, line 54 to column 5, line 24; and column 19, line 55 to column 20, line 2).

Art Unit: 2153

In reference to claim 46, Porras, Fishman, Steinbiss, Sarkissian, Costs and Abounaga explicitly show the limitations, as previously addressed for claims 1, 3,4,5,8,11,18,19,20,21, and 29, due to claim 46 reciting the combination of all of the limitations of the aforementioned claims.

In reference to claim 47, Porras, Fishman, Steinbiss, Sarkissian, Costs and Abounaga explicitly show the limitations (Abounaga columns 5-10).

Claims 8-10, and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Steinbiss, Sarkissian, and Costa as applied to claims above, and further in view of Fishman et al. (US Patent Application Publication 2001/0037321), hereinafter referred to as Fishman.

In reference to claims 8 and 43, the references Porras, Steinbiss, Sarkissian, and Costa fail to disclose updating only a portion of the statistical model associated with the most recent record event. Nonetheless, this would have been an obvious modification to the aforementioned method to one of ordinary skill in the art at the time of the invention, as further evidenced by Fishman.

In another analogous art, Fishman discloses a method for generating statistical models, in which the aforementioned model is updated by processing only the newly available records, One of ordinary skill in the art would have been so motivated to implement this modification into

Art Unit: 2153

the aforementioned method in order to quickly update the model, thereby improving processing speed (Fishman paragraph [0037], lines 1-3).

In reference to claims 9 and 44, Porras, Steinbiss, Sarkissian, Costs and Fishman explicitly show the limitations, (Porras column 2, lines 11-19 and column 5, lines 30-35; column 6, lines 38-52 and Costa column 2, lines 21-31; column 8, lines 1-41; column 8, lines 53 to column 9, line 5).

In reference to claims 10 and 30, Porras, Steinbiss, Sarkissian, Costs and Fishman explicitly show the limitations, (Fishman paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porras Sarkissian, Kawasaki, and Fishman as applied to the claims above, and further in view of Steinbiss et al. (US Patent 6,823,307), hereinafter referred to as Steinbiss.

In reference to claim 24, although Porras, Sarkissian, Kawasaki, and Fishman disclose substantial features of the aforementioned method, the references fail to explicitly disclose the method further comprising the step of: wherein if the history cache is full, updating the statistical model includes removing a least recent event from the statistical model. Nonetheless, this would have been an obvious modification to the aforementioned method, to one of ordinary skill in the art at the time of the invention, as further evidenced by Steinbiss.

Art Unit: 2153

In an analogous art, Steinbiss discloses a method for employing stochastic models that involves storing recently recognized elements in a cache, (abstract; column 2, lines 25-38; and column 5, lines 15-30). Steinbiss further discloses once the cache is full, removing the least recently stored element, (column 5, line 60 to column 6, line 7). This modification would have been obvious, because one of ordinary skill in the art would have been so motivated to implement this feature so as to maximize available memory space, thereby reducing cost associated with larger capacity cache memories, (Steinbiss column 5, line 66 to column 6, line 3).

Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Sarkissian, Kawasaki, and Fishman as applied to claims above, and further in view of Costa et al. (US Patent 6, 138,121), hereinafter referred to as Costa.

In reference to claim 25, Porras, Sarkissian, Kawaski, show substantial features of the invention, but fail to show limitations. However, the references fail to show the method wherein generating a statistical model from the set of record events includes generating an aggregation table for tracking and aggregation of each record event set stored in the history cache for each user identifier. Nonetheless, this modification to the aforementioned method, as disclosed by the references, would have been obvious to one of ordinary skill in the art at the invention, as further evidenced by Costa.

In an analogous art, Costa discloses a method for network management in which an aggregation table is employed for tracking system data and generating statistical reports, (column 2, lines 21-31; column 8, lines 1-41; column 8, lines 53 to column 9, line 5). One of ordinary

Art Unit: 2153

skill in the art would have been so motivated to implement this modification into the aforementioned method, so as to increase the ease of performing various actions (e.g. access, aggregate, extract, etc.), on relevant statistical data thereby increasing process efficiency, (Costa column 2, lines 15-18).

In reference to claim 26, Porras Sarkissian, Kawasaki, Fishman, and Costa explicitly show the limitations, (Fishman paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract).

Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Sarkissian, Kawasaki, Fishman, and Costa as applied to claims above, and further in view of Abounaga et al. (US Patent 6,460,045), hereinafter referred to as Abounaga.

In reference to claim 27, although Porras, Steinbiss, Sarkissian, Kawasaki, Fishman and Costa show substantial features to the claimed invention, the references fail to show explicitly the method generating a histogram statistical model representative of the network data. Nonetheless, histogram statistical models were well known in the art at the time of the invention, as further evidenced by Abounaga. Therefore, this limitation would have been an obvious modification to the aforementioned method, as disclosed by the references, for one of ordinary skill in the art.

In an analogous art, Abounaga discloses a method of building histogram statistical models, (column 5, line 37 to column 6, line 3). This modification would have been obvious to one of ordinary skill in the art, so as to increase the accuracy of the statistical model estimations and thereby increasing process effectiveness, (Abounaga column 1, lines 54-55).

In reference to claim 28, Porras, Steinbiss, Sarkissian, Costa, Fishman, and Abounaga explicitly show the limitations, (Abounaga column 5, line 37 to column 6, line 3 and Fishman paragraph [0008], lines 1-18; paragraph [0010], lines 1-5; and abstract).

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porras, Sarkissian, Fishman, and Costa as applied to claims above, and further in view of Abounaga et al. (US Patent 6,460,045), hereinafter referred to as Abounaga.

In reference to claim 36, although Porras, Sarkissian, Fishman, and Costa show substantial features to the claimed invention, the references fail to show explicitly the method generating a histogram statistical model representative of the network data. Nonetheless, histogram statistical models were well known in the art at the time of the invention, as further evidenced by Abounaga. Therefore, this limitation would have been an obvious modification to the aforementioned method, as disclosed by the references, for one of ordinary skill in the art.

In an analogous art, Abounaga discloses a method of building histogram statistical models, (column 5, line 37 to column 6, line 3). This modification would have been obvious to one of ordinary skill in the art, so as to increase the accuracy of the statistical model estimations and thereby increasing process effectiveness, (Abounaga column 1, lines 54-55).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShanya Nash whose telephone number is (571) 272-3957. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax number for the organization where this application or proceeding is assigned is (703) 746-7239. Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

LaShanya Nash
Art Unit 2153
June 24, 2005



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